Biology Seminar

"The untold story of plant carbon transport: How physiology mediates plant-environment relationships"

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ABSTRACT

Because of their immobile habit, plants have an intimate relationship with their environment and can experience strong selection for physiological strategies that allow them to survive and reproduce under specific environmental conditions. This is exemplified by the tight relationship that often exists between plant physiology and plant's native distributions. Willows are no exception, and their distributions in Minnesota are tied to their drought tolerance and recruitment strategies. Meanwhile, on a continental scale, their distributions appear to be limited by their phenology. In these and other native systems, a key factor in determining species distributions is whether or not there are costs associated with certain physiological strategies, which can lead to trade-offs that prevent species from being successful in all habitats. Despite the fact that many well-studied trade-offs are tied to changes in resource allocation, there has been limited work examining how carbon transport might play a role in mediating plant-environment interactions. To address this gap in knowledge, my current research is focused on understanding how vascular movement of carbon in the phloem influences carbon allocation, phenology and stress tolerance. In the end, my goal is to understand the ecological implications of phloem physiology and the role of vascular anatomy in shaping how plants interact with their environment.

January 22, 2015
12:00 noon
130 School of Medicine

Dr. Savage is a candidate for an Assistant Professor position in the Department of Biology.